114 27) but without touching on social organization.

[101] [122] Study of social organization began in 1938 when I made my first trip through the region under the auspices of the Carnegie Institution of Washington (Redfield and Villa Rojas, 1939, pp. 107–19). In 1942–44 we spent several periods among the Tzeltal of Oxchuc, establishing camp at Yochib, and published the results soon thereafter (Villa Rojas, 1946, 1947).

Since 1957 various investigations by the universities of Chicago, Harvard, and Stanford have been headed by the anthropologists Sol Tax, Norman A. McQuown, Evon Z. Vogt, Julian Pitt-Rivers, and A. Kimball Romney.

221 241 SUBSISTENCE PATTERNS AND FOOD HABITS

The Milpa

Nothing is of greater importance to the Indian than to have a good *milpa*. Three classes of milpas are cultivated: *sijomal*, planted in mid-January and harvested three months later; *nal-aual* or "March milpa" planted in mid-March and harvested toward the end of August; the main milpa, *jabil-caltic* or "milpa of the year," sown between April and May and harvested between November and December. The first two types are most often cultivated in the lower zone of Tierra Caliente, where humidity is favorable.

241 804 Among the Tzeltal of Oxchuc (Villa Rojas, 1946, pp. 510–39), milpa work begins in February with the measuring of the plot. The measuring rod (*jaubtic*), which presumably corresponds to a *brazada* (the distance between the arms extended), is equivalent to 1.98 m. The area 8 brazadas square takes the name of *tarea* (about 256 sq. m.). The area of the milpa is also computed according to the number of ears of corn needed for seeding: 60 ears of corn are required to fill 1.5 hectares, the average in milpas that we observed.

241 412 Since the bush is short, only a hatchet (*eche*) is necessary to cut it down. The

[P.199-A]

4: Villa Rojas E-4, 5 (1938-1944) 1969
NV9 Tzeltal NV9

241 Between September and October, when the tender ears are ready, some are torn loose to prepare atoles and tamales.

Toward the middle of October, when the milpa has reached maturity, all hands proceed to the task of the *dobla*, folding or breaking the stem of the plant so that the ear dries and may later be put into the barn. This is an easy task, in which men, women, and children take part.

[462] [857]

The harvest takes place in November and December with the participation of the whole family; it is a joyful task which compensates for all the moments of anxiety in the previous months, when subsistence was scarce. The produce from the milpa is gathered in large nets and later stored in a corner of the house or in some improvised structure nearby. The crop is measured by *zontles*, units of 400 ears, which are formed by counting the ears by fives; two ears are taken in one hand and three in the other until 400 are reached. The family of five members which manages to harvest from 15 to 20 zontles considers itself happy, since that much will last them the entire year, consuming 20 ears a day plus feeding one or two hogs and 10 or 12 chickens.

[592] [251] [804] [261] [231]

The milpa also produces various squashes, manioc (*dzinté*), and peanuts, which the Indians call *caxlan-chenek* ('Ladino's bean').

243 184 Exceptional among the Tzeltal is the cultivation of wheat in Amatenango. There the small valley and a creek have favored its development.

241 796 The most important ceremonies take place immediately after planting. They entrust the germination of the seed to the care of God, of the "thirteen holders of Heaven," and of "Tatik Jesucristo." The "thirteen holders of Heaven" refer to the principal saints who are mentioned in the prayers. The ceremonies consist in offerings of prayers and incense before the crosses kept in caves belonging to each paraje, and in one *bikit mixa* ('small Mass'), which the cabildos and principales of the

[778] [782]

[P 201 - B]

291 184 a typical outfit with special characteristics. For instance, the men of Tenejapa wear a hat of broad brim and pointed round crown, trimmed with thin ribbons of different colors. They also wear a dark chamarra or poncho with thin white stripes. The characteristic clothes of Cancuc are short, tight pants and a long shirt trimmed with red wool yarn. In Tierra Caliente the wool chamarra is not used nor is the variation in outfit so well defined.

Transportation

482 [484] [487] [492] Men and pack animals are the principal carriers in the Tzeltal region, which is crossed in all directions by narrow trails. Men carrying loads of 40–50 kg. usually walk, in one day, as far as 8 leguas (leagues). According to Blom and LaFarge (1926–27, 2:386), the Tzeltal of the highlands are so strong "que ponen en vergüenza a una mula." In 1944 I observed Indians passing by my Yochib camp, carrying chairs on their shoulders, in which a lady or a child of upper-class Ladinos from Ocosingo and Yajalon would be sitting. Pack animals are now becoming common among the Tzeltal, some of whom also have saddle horses.

482 147 [565] 492 491 Part of the Tzeltal-Tzotzil region is crossed by the Pan-American Highway joining Guatemala and Mexico City. In recent years, roads called "brechas de penetración" for motor vehicles are being constructed.

474 493 The natives of some communities (Oxchuc and Chanal) have organized cooperatives and purchased their own trucks.

804 *Units of Measure*

The system of measures still retains aboriginal characteristics. The main units are:

Nab: Distance between the end of the thumb and the middle finger extended.

Chutub: Distance between the end of the thumb and the index finger extended. It is equivalent to the jeme. The Indians do not use the cuarta (distance between the thumb and little finger extended).

[P 208-B]

804 *Shucubil* ("codo"): Distance from the elbow to the end of the middle finger extended.
Jaub ("braza" or "brazada"): Distance between the ends of both extended arms.
Yankabal (equivalent to the meter): Distance from the armpit to the extended middle finger of the opposite hand.

[484] The "legua" is also used and is equivalent to the distance a man can walk during one hour (approximately 5 km.).

Of square measures used for the milpa, the most common is the *tarea* (equivalent to a square of 8 jaubs). This is equivalent to a square of 16 m., which is very close to the mecate used by the Yucatec Maya.

The standard most often used for measuring maize or beans is the *almud*, which among the Tzeltal of Cancuc, Oxchuc, and Tenejapa, is equivalent to 4 *quartillas* (each quartilla is equivalent to 8 large *borcelanas*). The borcelana is an earthen cup or pot, which can be either small or large. The large one is equivalent to ½ kg. of maize, the small one to ¼ kg. of maize. The borcelana is used to measure chile.

[415]

Economics

241 *Division of Labor and Specialization*

462 Care of the milpa is men's work, but sometimes women help with light tasks such as weeding or harvesting. Seeding does not require great effort, but it is considered a job for men exclusively. Women may participate in chile seeding—but in the planting only; the holes in the ground can be made only by men, who use a *macana* or planting stick. Cutting and carrying firewood are tasks for men, but women may perform them when men cannot. Women can handle an axe or machete skillfully. Fetching water, from river or fountain, is work for women. It is considered inappropriate and ridiculous that a man carry a cantaro on the hip. Laundry and all kitchen duties are performed by women, as well as spinning, knitting, sewing, embroidering, and making of earthenware. Manufacture

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[P 209-A]

[Text continues on p. 210-B]

7: Nash E-5 (1957-1967) 1970 NV9 Tzeltal NV9
Amatenango del Valle

tions of self will find a responsive audience only within these linguistic and physical boundaries. The sense of insulation is a denial of regional and national political institutions in which they interact with the other Indians and Ladinos who are part of their present world and share their history. The town itself is a product of the Spanish colonial *congregación,* which drew together diverse Indian populations that had been scattered in small settlements. The outlying barrios are occupied by Indians who have moved out from the center, as well as foreign Indians who had worked in the *fincas,* or large plantations, within the township. These latter people are referred to by a derisive term, *Kurik,* meaning roughly "country hick." Beyond these, and still within the municipal limits, there are a series of *colonias,* settlements populated by Indians who have moved here from other towns and by *mestizos,* or acculturated Indians. These settlers acquired land in the time of Juarez or later in the Cardenas period. Ladino men are called *Kaštan* and women *Šinlan;* foreigners who do not appear to be of the country are called *Alemán,* the Spanish term for German.

The focus of this book is on the lives and thoughts of people living within the center. The people of Tzo'ontahal live in a square world, surrounded by a round universe. From the square hole, cut in the earth at the center post of their square house to receive the sacrifice of a live chicken when the house is built, stretches a square village (it appears as a rectangle on the map, but they draw it as a square).[2] The fields are measured in squares of twenty-five arms' breadths, with five handspans measuring the square between each plant. Within this square world, they have elaborated techniques for dealing with spiritual and human co-residents in curing rituals, offerings for crops, burial practices, and baptism rites. Their present cultural stock reveals a selective absorption of Spanish colonial features along with twentieth-century innovations. They have techniques for planting and harvesting milpa, marketing the pottery manufactured in all the households, curing an eclipse of the moon, divining causes of illness and curing the maladjusted social relations which cause it, manufacturing and

2. This view of the world as square is shared by Tzeltal and Tzotzil neighbors in Larraínzar (Holland 1963:69), San Pedro Chenalhó (Guiteras Holmes 1961:254), and Pinola (Hermitte 1964). The four-direction concept of the village and world noted by Landa (Tozzer 1941:135) suggests a square-space concept.

9:Nash E-5 (1964) 1970 NV9 Tzeltal NV9
Tzo?ontahal

formants' conscious understandings as well as of their subconscious patterns of behavior. [121] [024]

Description of behavior requires a theoretical approach to the problems of segmenting activity streams, selecting events, and ordering them. Too large chunks of behavior are not useful in comparisons made over time in the same society or between societies. However, because human (as well as animal) behavior is characterized by motivation and cognition (Tolman, 1961) we cannot expect to isolate minimal units which are invariant from one context to another. Verbs, as French (1954, p. 162) points out, are one-act plays in which a change of dramatis personae creates entirely new meaning. Furthermore, the symbolic weight of a single act varies; it can encompass the history of an institution, such as crossing oneself, or it can establish identification with a social movement, such as raising a clenched fist. However, for any behavioral schema, which I define, following Piaget, as component acts structured in an organized totality (Flavell, 1963, p. 54), it is possible to segment acts and assess their significance. In the major schema of the inauguration of officials in Tzo?ontahal, place, time, and roles are the bases for structuring related sets of activities.

Segmenting human behavior has been treated as either an actor-oriented or an observer-oriented problem. Pike (1954) and Adams (1962) rely on informants' advice to isolate the "behavioreme," whereas [114] Harris (1964, p. 367 ff.) rejects the actor's statement of goals in favor of the investigator's own definitions of action units. If the "basic unit of action in the human body is purposive motion" (Burke, 1962, p. 61), then we must consider the meaning of action at the first stage of an analysis.[4] The anthropological observer's segmentation at this point injects cultural bias which stems from his point of view (Hymes, [124] 1964, p. 14; Spier and Sapir, 1930, p. 217). Since our

[4] Most verbs used by informants in describing action patterns imply purpose. The informant says that he "eats," not that he raises food to his mouth and masticates it. The coding of motives and goals in the verbs underlines the importance of eliciting in the performer's own language. For example, when one observes the Indians as they enter the townhall, one sees them kneel and do what could be interpreted as crossing themselves. Asked what they do, the informants reply, "We measure our noses (*sp'is smi?ik*)." Measuring water (*sp'is ha?*) is another important ceremonial act. This suggests the possible ceremonial significance of measure in ceremonial performances. To assume knowledge of the act because of its similarity to Catholic forms might rule out suggestions requiring deeper probing. Cf. Adams' (1962) distinction between the reported and the observed act, and Barker (1963). [121] [124] [193] [788] [804] [114]

[p. 210-B]